

PROCEEDINGS OF LEARNED SOCIETIES.

ROYAL SOCIETY.

December 15, 1853.—Thomas Bell, Esq., V.P., in the Chair.

“On a New Method of propagating Plants.” By E. J. Lowe, Esq., F.R.A.S., F.G.S. &c.

The author states that it had occurred to him, that if a cutting of a plant were sealed at the base, so as to exclude the moisture of the soil from ascending the stem in injurious quantities, the method of striking cuttings of most species of plants would not be so precarious a process as at present; and accordingly some collodion was obtained in order to make the experiment.

With respect to this new process, he states, that immediately upon the cutting being severed from the parent stem, the collodion was applied to the wound, and then left a few seconds to dry, after which the cuttings were potted in the ordinary manner.

To test the value of this new process more effectually, duplicates of all the species experimented upon were at the same time similarly planted, without the collodion being applied to them.

Experiments were carried on in two different ways; one batch of cuttings being placed on a hot-bed, whilst a second batch was planted in the open ground, without even the protection of glass.

First Batch.—All of which were placed on a hot-bed on the 1st of September, and examined on the 1st of October:—

Stove Plants.

Number of cuttings with collodion applied.	Name of plant.	Number of cuttings which took root.	Number of cuttings without the application of collodion.	Number of cuttings which took root.
1	<i>Ixora coccinea</i>	1	1	0
1	<i>Tacsonia manicata</i>	1	1	1
3	<i>Franciscea Hopeana</i>	3	3	0
3	<i>Franciscea Pohliana</i>	3	3	0
2	<i>Gloxinia Maria van Houtte</i>	0	2	1
2	<i>Begonia incarnata</i>	2	2	1
8	<i>Achimenes patens</i>	7	8	6
2	<i>Hoya bella</i>	2	2	1
2	<i>Rondeletia speciosa</i>	2	2	1
2	<i>Allamanda nerifolia</i>	2	2	1

Greenhouse Plants.

6	<i>Boronia serrulata</i>	5	6	0
3	<i>Polygala dalmaisiana</i>	1	3	0
6	<i>Polygala grandiflora</i>	3	6	2
6	<i>Verbena luna</i>	6	6	6
1	<i>Chorozema cordata</i>	1	1	0
1	<i>Epacris pallida</i>	0	1	0
2	<i>Leschenaultia formosa</i>	2	2	1
1	<i>Swainsonia astragalifolia</i>	1	1	0
1	<i>Swainsonia galegifolia</i>	0	1	0
2	<i>Abelia rupestris</i>	2	2	0
4	<i>Plectranthus concolor, picta</i>	2	4	2

Second Batch.—Planted in the open ground on the 1st of September, and examined on the 1st of October:—

Hardy Plants.

Number of cuttings with collodion applied.	Name of plant.	Number of cuttings which took root.	Number of cuttings without the application of collodion.	Number of cuttings which took root.
12	<i>Garrya elliptica</i>	5	12	1
12	<i>Erica vagans</i>	7	12	4
18	<i>Bupleurum longifolium</i>	6	18	0
12	<i>Laurus fœtens</i>	10	12	7
6	Rose, Souvenir de la Malmaison...	4	6	3
12	<i>Taxus baccata</i> , golden-leaved var.	8	12	4

	Total number of cuttings to which collodion was applied.	Number of cuttings which took root.	Total number of cuttings without the application of collodion.	Number of cuttings which took root.
First batch	59	46	59	23
Second batch ...	72	40	72	19

The experiment, the author considers, speaks for itself. Notwithstanding the season being too far advanced for the full benefit of the process to be thoroughly observed, still twice as many cuttings took root treated by the new method as had rooted by the old. The mortality in the open ground was increased by slugs having eaten off above the soil some of the cuttings; those thus damaged were examined after they had been in the ground a month, and it was found that the collodion was quite as sound as when first applied. It would therefore appear that the collodion seals the wound of the cutting, and protects it from the fatal effects of damp, until roots are prepared to force through the covering of gun-cotton. It is further stated, that the application of this solution has been found to be exceedingly beneficial in the pruning of such plants as *Euphorbia speciosa*, *Impatiens latifolia*, *Impatiens latifolia-alba*, *Hoya bella*, *Hoya imperialis*, &c., the cut branches being prevented from bleeding.

It is the author's intention next spring to follow out this experiment, in budding and grafting, as he considers that it will also be useful in this branch of horticulture.

Gutta-percha, dissolved in æther, was in some instances substituted to heal the wounds caused by pruning; yet owing to this solution not drying as rapidly as collodion, the first, and sometimes the second application was not sufficient.

The effect of these solutions upon cut flowers was very marked. Two branches were gathered as nearly alike as possible; to the flower-stalks of the one, collodion was applied. These flowers were placed in vases filled with water; those coated over with

collodion began to fade in thirty-six hours, and many were quite dead in three days; whilst the flowers merely placed in water in the ordinary manner remained fresh and healthy. Those that faded soonest were *Reseda odorata* and *Tropæolum majus*, and those which were least affected were *Tagetes erecta* and *Senecio erubescens*.

ZOOLOGICAL SOCIETY.

January 13, 1852.—W. Yarrell, Esq., in the Chair.

The following papers were read:—

1. MONOGRAPH OF THE FAMILY APODIDÆ, A FAMILY OF CRUSTACEANS BELONGING TO THE DIVISION ENTOMOSTRACA; WITH A DESCRIPTION OF A NEW SPECIES OF APUS, AND TWO SPECIES OF OSTRACODA BELONGING TO THE GENUS CYPRIIS. BY W. BAIRD, M.D., F.L.S. ETC.

IN drawing up this communication, one of the objects I had in view was to call the attention of the members of this Society to a group of animals which must be very numerous, especially in warm climates, but which nevertheless have been but little attended to. The animals to which I propose directing your attention belong to that very interesting division of the great class CRUSTACEA, called ENTOMOSTRACA. The chief interest attached to these creatures, most of which are very small, is derived from watching their gambols in their native element, and examining by the aid of the microscope the wonderful beauty of their various organs, especially their organs of motion and breathing. Unfortunately few naturalists, comparatively speaking, have paid much attention to them, and collectors of objects of Natural History have generally, perhaps from their minuteness, overlooked them almost entirely. Those however who have watched these little creatures, whether sporting in the freshwater ponds and lakes of the interior, or illuming the bosom of the ocean with their brilliant phosphorescent light, have not failed to be struck with the beauty and elegance of their forms,—a beauty and elegance which it is difficult to describe, and the attempt to do which has caused the grave naturalist Otho Fredericus Müller involuntarily to rise into the language of poetry.

The largest species of *Entomostraca* belong to the order *Phyllo-poda*, and the beauty of their movements through the water and the symmetry of their various organs of motion are truly exquisite. The family *Apodidæ* contains the largest individuals, though as yet the number of species described is not great. One species of the family was known to Linnæus, who mentions, in the first edition of his 'Fauna Suecica' (1746), having seen a specimen in 1728 at the house of a naturalist in London, who told him he had received it from Prussia. Jacob Frisch * had, previously to the publication of the 'Fauna Suecica,' made known and figured a species, specimens of which he had received from Klein, then at Dantzic, who had found it in East Prussia. Specimens of this species were sent soon afterwards

* Insecten in Deutschland, 1732.